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Joy Morton, founder LISLE, ILLINOIS

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BUCKEYES AND HORSECHESTNUTS FOR SPRING BLOSSOM

Oppositely arranged palmately compound leaves (the leaflets grouped in clusters somewhat like the fingers of a hand), conspicuous winter buds, showy candle-like spikes of flowers of various colors and shiny coated round brown seeds—these are the trade marks of the Aesculus, genus of shrubs and trees widely distributed throughout the temperate regions of the northern hemisphere. Mostly spring blooming (late May, early June), they offer a spectacular floral interest as dramatic in appearance as that furnished by any of our flowering trees. In addition they all show a pleasing contour outstanding in its shapeliness and a distinctive boldness of foliage.

The Aesculus are not without their shortcomings, however, some species being classed as untidy because of the litter they drop. Whether it be faded flowers, fallen leaves or fruit, whose hulls interfere with lawn mowing, they can present a troublesome problem. A leaf blotch is bothersome on the foliage of the Common Horsechestnut of Southeastern Europe, too, limiting its usefulness. Encouraging news regarding control of this fungus, however, hints that two sprays of captan or ferbam (2# in 100 gal. of water), the first applied when the leaves are one third grown; the second, eight to ten days later, will prevent occurrence of the disease.

The distinction of being the first Aesculus to bloom in the Arboretum goes to the Texas Buckeye, *Aesculus arguta,* an interesting species indigenous to the eastern part of that state. Inclined to be more shrubby in habit than its close relative, the Ohio Buckeye, this semi-arborescent species grows into a low trunked, round headed specimen 10 or 12 feet tall, attractive in appearance and well adjusted climatically.

Although perhaps most effective in early May when its ascending branches are terminated with medium sized spikes of pale, creamy yellow flowers, the foliage is good looking, too, retaining its fresh light green coloring throughout the summer. The 7 to 9 lance shaped leaflets are long pointed with deeply and doubly toothed margins. In winter its buds are conspicuous.

Like other Aesculus, it produces quantities of shiny 'buckeyes' in the fall, fruit of special interest to children. The flowers aside from their subtle coloring are very attractive to bees. A color combination we have found pleasing features the Texas Buckeye underplanted with the dwarf orange scarlet Alpine Japanese Flowering Quince, *Chaenomeles japonica alpina.*

Southern United States is also the native habitat of several other desirable forms notable particularly for their showy flowers or later season of bloom. One of these, the Scarlet Woolly Buckeye, *Aesculus discolor mollis,* defers flowering until early June at which time its leafy branches are bedecked with good sized (to 10 inch) panicles of interestingly shaped bright scarlet blooms marked with gold at the base of the petals. Its lustrous dark five-parted foliage is particularly handsome. The species grows to eight feet here and tolerates part shade.

Another Southerner is the Red Buckeye, *Aesculus pavia,* a tall shrub or small rounded tree (to 12 ft.) with smooth branches, non resinous buds and richly colored flowers in panicles 3 to 6 inches in length. Individual blooms are about 1½ inches long with four petals and tubular calyxes. The stamens and pistil are elongated, the latter protruding beyond the petals, which remaining closed, detract somewhat from the floral interest.

Five short stalked leaflets, lance shaped, obovate or oblong in outline, sharply and often doubly toothed and glabrous except for a slight pubescence on the veins beneath are characteristic of the Red Buckeye, as are the smooth fruits ripening in the fall. It is of interest to know this is one of the trees mentioned in Thomas Jefferson's garden records as having been grown at Monticello. The plant was introduced into cultivation in 1711.

An entirely different tree is the Red Horsechestnut, *Aesculus carnea,* a hybrid form originating before 1818, whose parentage has been traced to the Red Buckeye *("pavia")* and the European Horsechestnut *("hippocastanum").* Inheriting its height from the latter, it grows into a specimen 30 to 50 ft. tall, round headed and with the genera's typical symmetry. Its five-parted subsessile or short stalked leaflets resemble *"hippocastanum"* both in size (3 to 6" long) and texture, being firm and leathery. They are dark green with lustrous upper surfaces, glabrous lower. A slight stickiness characterizes the leaf buds.

Considerable variation will be noted in the color of the flowers which are borne in erect panicles eight inches in length. The coloring ranges from flesh pink to deep red with the lighter hues predominating.

A variety of *"carnea"* considered far superior to the type species is *"brioti",* the Ruby Horsechestnut, which originated in France in 1858. With longer (to 10"), showier panicles made up of larger, rose pink flowers with deeper toned velvety markings on the upper petals and near the throats of the lower, the floral effect is the finest and most striking of all the colored forms. Under normal conditions the blooming season extends from mid to late May, providing an impressive landscape

Red Horsechestnut, *Aesculus carnea* Hayne, a hybrid of Red Buckeye *("pavia")* and European Horsechestnut *("hippocastanum")* parentage.

feature. Both the rounded habit of growth and coarse textured dark green foliage characteristic of the parent plant have carried through into this variety.

If handsome, burnished orange fall foliage color (appearing early), pleasing branch architecture and decorative spring buds are to be ignored because of the genera's inherited reputation for untidiness, the Ohio Buckeye, *Aesculus glabra,* would soon disappear into the realm of forgotten trees. Those willing to overlook its few faults, however, will find that it offers far more than it is generally given credit for,—its full share of beauty as well as hardiness, ease of cultivation and resistance to serious insects and diseases.

Contrary to the frequently expressed opinion, the Buckeye is not awkward in appearance, well grown specimens showing a shapely oval or broadly rounded crown of small spreading branches, drooping and usually upturned at the ends. It is a moderate to slow grower reaching heights up to 30 or 40 feet and trunk diameters seldom exceeding two. In addition to the dark gray, scaly and shallowly fissured bark, the differences distinguishing it from its European relative, the Horse Chestnut are plainly evident—smooth rounded buds without stickiness, 5 (occasionally 7) narrower and smaller leaflets and pale yellow flowers in loose upright spikes. The latter appear in mid-May, a climax to the showy spectacle afforded by the opening and development of the precocious leaf and flower buds.

As might be supposed, the name Buckeye owes its derivation to the fancied resemblance of the polished brown, white marked seeds (buckeyes) to the eyes of a deer.

In the higher mountains of the south will be found the tallest of the American Buckeyes, *Aesculus octandra,* a slender, erect branched tree sometimes growing to 90 ft. and attaining a trunk diameter of from 2 to 4. A rich bottomland soil is its favored habitat, and there it most often occurs as a solitary specimen in mixture with other hardwoods. Under cultivation it adapts itself to drier sites.

The Yellow or Sweet Buckeye is recognized in winter by its long brown buds without stickiness and by the horse-shoe shaped leaf scars. At that season one is also most apt to notice the gray brown bark, smooth at first, later breaking into thin irregular scales.

Large palmately compound leaves consisting of 5 to 7 sharp pointed and finely toothed oblong leaflets 3½ to 8 inches long are points of distinction. So too, are the long petioles supporting them. When the dark green leaves are about half grown the blossoms appear, yellow flowers in large pyramidal clusters (to 7 inches long) at the ends of the branches.

The smooth, round, thick shelled husks containing the fruit are rusty brown in color and enclose 1 to 3 shiny coated seeds an inch and a half in diameter. Their kernels are sweeter than those of most Aesculus.

Southeastern Europe is the home of the more familiar Horsechestnut, *Aesculus hippocastanum,* an imposing tree which has been grown and admired since 1576. A Horsechestnut in bloom is a striking sight, "a green pyramid supporting a thousand pyramids of white".

Sticky brown buds in winter, bold palmately compound foliage (5 to 7 wedge shaped leaflets) of coarse texture, conspicuous upright flower panicles and shiny brown seeds—these are the characteristic ear-marks by which this species is recognized. A tall grower (50-75 ft.) and of noble proportions, it displays a handsome perfectly shaped conical head in summer and a winter branch structure of unusual interest architecturally. The central trunk though often divided, is straight and erect with downward curving side branches which are gracefully upturned at the ends. The late May floral effect accounts for much of the Horsechestnut's popularity, the terminal inflorescences rising like huge white candles from amidst clusters of dark green foliage. The 'buckeyes' enclosed in warty tan colored capsules, while highly prized by children, are the despair of those adverse to untidiness, for they, like the leaves and withered flower clusters tend to clutter the ground beneath the tree. The Horsechestnut has proved of rather slow growth here, showing a definite preference for a deep moist soil and a site well protected from hot summer winds. The handsomest specimens in this area are all in sheltered locations, growing where they have protection and plenty of room for development.

A tree in many ways superior to the Common Horsechestnut, is *Aesculus hippocastanum baumanni,* a double flowering sport found in Switzerland around 1822. Although indistinguishable in form and habit of growth from the type species, the Baumann Horsechestnut is showier in blossom and a neater subject. The fully double white flowers which have the appearance of miniature popcorn balls, occur in close erect spikes, and being sterile remain effective longer than the blossoms of the ordinary Horsechestnut. Another advantage is that there are no objectionable fruits.

E. L. Kammerer

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